

8/9/9 (Item 9 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.

12445785 BIOSIS NO.: 200000199287

Hindmilk feedings for hospitalized low birthweight **infants** in

Nigeria: Effect on **infant** weight gain and maternal milk volume.

AUTHOR: Slusher Tina(a); Hampton Rebecca; Ishaya Angyo; Bode-Thomas Fidelia
; Pam Sunday; Akor Francis; Meier Paula

AUTHOR ADDRESS: (a)Rush Children's Hospital, Chicago, IL**USA

JOURNAL: Pediatric Research 47 (4 Part 2):p297A April, 2000

CONFERENCE/MEETING: Joint Meeting of the Pediatric Academic Societies and
the American Academy of Pediatrics. Boston, Massachusetts, USA May 12-16,
2000

SPONSOR: American Academy of Pediatrics

ISSN: 0031-3998

RECORD TYPE: Citation

LANGUAGE: English

SUMMARY LANGUAGE: English

DESCRIPTORS:

MAJOR CONCEPTS: Nutrition; Epidemiology (Population Studies)

BIOSYSTEMATIC NAMES: Hominidae--Primates, Mammalia, Vertebrata, Chordata,
Animalia

ORGANISMS: human (Hominidae)--female, hospitalized, infant, low
birthweight, mother, patient, vulnerable population

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): Animals; Chordates; Humans;
Mammals; Primates; Vertebrates

METHODS & EQUIPMENT: breast pump--frequent in-hospital use; hindmilk
feeding--feeding method

GEOGRAPHICAL NAME: Nigeria (Ethiopian region)

MISCELLANEOUS TERMS: infant weight gain; own mother's milk--maternal
volume; Meeting Abstract; Meeting Poster

CONCEPT CODES:

37056 Public Health: Epidemiology-Miscellaneous

13202 Nutrition-General Studies, Nutritional Status and Methods

00520 General Biology-Symposia, Transactions and Proceedings of
Conferences, Congresses, Review Annuals

BIOSYSTEMATIC CODES:

86215 Hominidae

8/9/37 (Item 37 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.

03950277 BIOSIS NO.: 000076035843
ENERGY INTAKE AND WEIGHT GAIN OF VERY LOW BIRTH WEIGHT BABIES FED RAW
EXPRESSED BREAST MILK
AUTHOR: SPENCER S A; HENDRICKSE W; ROBERTON D; HULL D
AUTHOR ADDRESS: DEPARTMENT OF CHILD HEALTH, UNIVERSITY HOSPITAL, QUEEN'S
MEDICAL CENTRE, NOTTINGHAM NG7 2UH.
JOURNAL: BR MED J 285 (6346). 1982 (RECD. 1983). 923. 1982
FULL JOURNAL NAME: British Medical Journal
CODEN: BMJOA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: The energy intake and weight gain of low birthweight
infants (under 1500 g) fed expressed breast milk were measured.
Between the 2nd and 4th wk of life the mean energy intake was 577 kJ (138
kcal)/kg per day and the mean weekly increase in weight 119 g/wk.
Feeding energy-rich **hind milk** to 2 **babies** increased
their energy intake but had little effect on their rate of weight gain.
There appeared to be no correlation between energy intake and weight
gain, probably owing to variation in the absorption of nutrients from
expressed breast milk. This study forms a basis for a comparison of
weight gain in **babies** fed alternative regimens of artificial milks.

DESCRIPTORS: HUMAN ARTIFICIAL MILK NUTRIENT ABSORPTION

CONCEPT CODES:

12002 Physiology, General and Miscellaneous-General
13202 Nutrition-General Studies, Nutritional Status and Methods
13203 Nutrition-Malnutrition; Obesity
13214 Nutrition-General Dietary Studies
13518 Food Technology-Dairy Products
13534 Food Technology-Synthetic, Supplemental and Enrichment Foods
(1970-)
16504 Reproductive System-Physiology and Biochemistry
25000 Pediatrics
13532 Food Technology-Preparation, Processing and Storage (1970-)
16501 Reproductive System-General; Methods
25503 Developmental Biology-Embryology-Pathological

BIOSYSTEMATIC CODES:

85715 Bovidae
86215 Hominidae

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):

Animals
Chordates
Vertebrates
Nonhuman Vertebrates
Mammals
Nonhuman Mammals
Artiodactyls
Primates
Humans

17/9/171 (Item 47 from file: 50)
DIALOG(R)File 50:CAB Abstracts
(c) 2003 CAB International. All rts. reserv.

00139040 CAB Accession Number: 740411046

Development, manufacture and economics of baby food on the basis of dried milk. I. Development of the food.

Uhle, H. J.

Univ., Giessen, German Federal Republic.

Milchwissenschaft vol. 29 (5): p.265-274

Publication Year: 1974

ISSN: 0026-3788 --

Language: German Summary Language: english

Document Type: Journal article

Adaptation of the proteins, fats, carbohydrates, minerals and vitamins of cows' **milk** to **approximate** those of **human milk**

is discussed in detail, comparative values and progressive calculations being presented. A recipe for a dried **concentrate** incorporating cows' milk (2% fat), lactalbumin and vegetable fat is put forward, the **concentrate** supplemented with carbohydrates, minerals and vitamins forming the final infant **formula**; and the **formula** reconstituted with water in the 15:90 proportion contains 2% protein, 4% fat and 8.2% carbohydrate. 14 ref.

DESCRIPTORS: infant feeding; humanized milk; manufacture

IDENTIFIERS: formulae

CABICODES: Milk & Dairy Produce (QQ010)

17/9/192 (Item 7 from file: 53)
DIALOG(R)File 53:FOODLINE(R): Food Science & Technology
(c) 2003 LFRA. All rts. reserv.

00706596 FOODLINE ACCESSION NUMBER: 429106

Lipids in infant nutrition.

Gurr M

Lipid Technology 9 (1), 14-17 (9 ref.)

1997

ISSN NO: 0956-666X

LANGUAGE: English

DOCUMENT TYPE: Journal article

FOODLINE UPDATE CODE: 19970304

ABSTRACT: The lipid composition of **human breast milk** is used as a standard when designing commercial infant formulas. Changes in the amount and composition of **breast-milk fat** during lactation are not easily replicated. Fat in cows' milk is seen to have a less than ideal composition for human babies. A comparison of the lipid composition of cows' **milk** and **human milk** is presented. The fatty acid composition of **human milk** is influenced by the composition of the maternal diet. Long-chain polyunsaturates of the n-3 family make a small but significant contribution to **human milk**. Requirements of infants for lipids, infant biosynthetic capacity, and requirement for lipids in infant **formula** in terms of digestibility of triacylglycerols, cholesterol, polyunsaturated fatty acids, and fat-soluble vitamins are discussed.

SECTION HEADING: NUTRITION

DESCRIPTORS: BABIES; CHOLESTEROL; COMPOSITION; FATTY ACIDS; FORMULAE; HUMAN MILK; HUMANS; LIPIDS; MILK; NUTRITION; POLY; POLYUNSATURATED; POLYUNSATURATED FATTY ACIDS; POLYUNSATURATED LIPIDS; REQUIREMENTS; TRIGLYCERIDES; UNSATURATED; UNSATURATED FATTY ACIDS; UNSATURATED LIPIDS

17/9/197 (Item 12 from file: 53)
DIALOG(R)File 53:FOODLINE(R): Food Science & Technology
(c) 2003 LFRA. All rts. reserv.

00503316 FOODLINE ACCESSION NUMBER: 433106
Nursing dairy product having amino acid composition similar to human breast milk.

Kaneko T; Otomo H; Yonekubo A; Kuwata T
PATENT ASSIGNEE: Meiji Milk Prod Co Ltd
PATENT: JP 8214775 A

PRIORITY APPLICATION DATE: 19950216

NOTES: Date of publication: 27.8.96

X-REFERENCE: PREPARED FOODS

LANGUAGE: Japanese

SUMMARY LANGUAGE: English

DOCUMENT TYPE: Patent

FOODLINE UPDATE CODE: 19970423

ABSTRACT: This infant milk **formula** containing cows' milk is said to be close in composition to that of **mothers' milk**. The histidine content is adjusted to **approximately** 2.5% of the total amino acid content. The histidine content is adjusted by lowering the ratio of protein having a histidine content of 1.6% or less. Casein and whey protein are used as the milk protein and beta-lactoglobulin is removed from the whey protein, and/or the alpha-lactoglobulin content is increased in accordance with a specified equation.

SECTION HEADING: CONVENIENCE FOODS

DESCRIPTORS: ADDITIVES; AMINO ACIDS; BABIES; FORMULAE; HISTIDINE; IMPROVEMENT; JAPANESE PATENT; MILK; MILK PROTEIN; MILK PROTEINS; PROTEINS

17/9/196 (Item 11 from file: 53)
DIALOG(R)File 53:FOODLINE(R): Food Science & Technology
(c) 2003 LFRA. All rts. reserv.

00534045 FOODLINE ACCESSION NUMBER: 374312

Production of hydrolyzate of milk serum protein not causing precipitate.
Shimamura S

PATENT ASSIGNEE: Morinaga Milk Industry Co Ltd

PATENT: JP 6153792 A

PRIORITY APPLICATION DATE: 19921120

NOTES: 3.6.94

LANGUAGE: Japanese

SUMMARY LANGUAGE: English

DOCUMENT TYPE: Patent

FOODLINE UPDATE CODE: 19950606

ABSTRACT: A whey protein hydrolysate is described which has good heat-stability and flavour. This is obtained by treating a solution of whey in an ion exchange resin by a desalting procedure. The calcium concentration is adjusted to 350 mg or less per 100 g of protein, then mild hydrolysis using an endo-peptidase followed by heat de-activation of the enzyme is performed. This whey protein hydrolysate is suitable for infant **milk formula** with a protein content **simulating mother's milk**.

SECTION HEADING: DAIRY PRODUCTS

DESCRIPTORS: BABIES; FORMULAE; HEAT RESISTANCE; HYDROLYSATES; MILK; MILK PROTEIN; MILK PROTEINS; PATENTS; PROTEIN HYDROLYSATES; PROTEINS; WHEY; WHEY HYDROLYSATES; WHEY PROTEIN; WHEY PROTEINS

17/9/193 (Item 8 from file: 53)
DIALOG(R)File 53:FOODLINE(R): Food Science & Technology
(c) 2003 LFRA. All rts. reserv.

00675186 FOODLINE ACCESSION NUMBER: 466376
Human milk lipids as a model for infant formulas.
Jensen R G
Lipid Technology (March), 10 (2), 34-38 (8 ref.)
1998

ISSN NO: 0956-666X

LANGUAGE: English

DOCUMENT TYPE: Journal article

FOODLINE UPDATE CODE: 19980507

ABSTRACT: Manufacturers of infant formulas have attempted to mimic the fatty acid composition of **human milk**. This has caused difficulties as **human milk** contains arachidonic, eicosapentaenoic, and docosahexaenoic acids, which are needed for optimal development of the brain, nervous system, and visual process in infants. In addition, the structures of triacylglycerols, which control absorption of fatty acids and calcium, differ in formulas and **human milk**. This paper presents data on the composition and structure of infant formulas and **human milk**, and describes efforts by the **formula** industry to mimic these. The following are considered: the nature of **milk** and **formula** lipids; fatty acids in **human milk**; the need for long-chain polyunsaturates; trans fatty acids in milk and **formula**; fatty acids in **formula** lipids; structure and content of milk and **formula** triacylglycerols; and the digestion of milk lipids by the infant. The author concludes that the infant-**formula** industry has successfully **simulated** the fatty acid profile of **human milk** and **approximated** the triacylglycerol structure, although formulas do lack some of the substances found in **human milk**.

SECTION HEADING: CONVENIENCE FOODS

DESCRIPTORS: COMPOSITION; FATTY ACIDS; HUMAN MILK; HUMAN MILK
SUBSTITUTES; INFANT FORMULAS; LIPIDS; POLYUNSATURATED FATTY ACIDS;
TRANS FATTY ACIDS; TRIACYLGLYCEROLS

17/9/198 (Item 13 from file: 53)
DIALOG(R)File 53:FOODLINE(R): Food Science & Technology
(c) 2003 LFRA. All rts. reserv.

00503158 FOODLINE ACCESSION NUMBER: 425312
Whey protein dominant baby milk food.
Georgi G; Sawatzki G; Schweikhardt F
PATENT ASSIGNEE: Milupa AG
PATENT: EP 741522
PATENT: WO 9517102 DATE:19950629
APPLICATION COUNTRY: DE (DATE(S):19931223)
PRIORITY APPLICATION DATE: 19941218
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; NL; PT;
SE
X-REFERENCE: FUNCTIONAL FOODS
LANGUAGE: German
SUMMARY LANGUAGE: English
DOCUMENT TYPE: Patent
FOODLINE UPDATE CODE: 19970116
ABSTRACT: In the production of whey-protein-dominant **formula** milk,
bovine whey protein is added to the cows' milk in order to
imitate the high whey protein content of **human milk**.
This has the disadvantage of raising the threonine content of the
formula milk. It is disclosed that the threonine content can be
reduced by decreasing or eliminating the glycomacropeptide content of
the added whey **powder** and/or whey protein **concentrate**.
SECTION HEADING: CONVENIENCE FOODS
DESCRIPTORS: EUROPEAN PATENT; FORMULAE; INFANT FOODS; INFANT FORMULAS;
MILK; REDUCTION; THREONINE

17/9/199 (Item 14 from file: 53)
DIALOG(R)File 53:FOODLINE(R): Food Science & Technology
(c) 2003 LFRA. All rts. reserv.

00497023 FOODLINE ACCESSION NUMBER: 409528
A breakthrough in infant formula fats.
Kavanagh A R
Food Ingredients Europe: conference proceedings, Frankfurt, November 1995.
123-126 (14 ref.)
Food Ingredients Europe
PUBLISHER: Miller Freeman Technical Ltd., Maarssen
1995
ISBN NO: 90-73220-15-7
CLASSIFICATION: 664.4/.5
LANGUAGE: English
DOCUMENT TYPE: Book; Conference paper
FOODLINE UPDATE CODE: 19960610
ABSTRACT: Much of the energy supplied by breast milk is in the form of
human milk fat (HMF). Infant formulae are prepared to give an
approximate match of the fatty acid composition of HMF. However,
the fatty acids in HMF are arranged on the glycerol backbone of the fat
molecule with most of the saturated fatty acids being found in the mid
(sn-2) position and mainly unsaturated fatty acids in the sn-1 and sn-3
positions. Blending vegetable oils does not achieve this. An infant
formula fat has been produced by enzymic-modification technology.
This fat is similar in composition and structure to **human**

milk fat. Its benefits, in terms of fat and mineral absorption and reduced stool hardness and constipation, are highlighted.

SECTION HEADING: CONVENIENCE FOODS

DESCRIPTORS: COMPOSITION; COMPOUNDS; DIET; ENERGY; FATTY ACIDS; HEALTH
; INFANT FORMULAS; MILK HUMAN; STRUCTURE

17/9/215 (Item 1 from file: 144)
DIALOG(R)File 144:Pascal
(c) 2003 INIST/CNRS. All rts. reserv.

16042075 PASCAL No.: 03-0190064
Evaluation of infant formula protein quality
BARIC I Colic; KRBAVCIC I Panjkota; PEDISIC S
Faculty of Food Technology and Biotechnology, University of Zagreb,
Pierottijeva 6, 10000 Zagreb, Croatia
Journal: Acta alimentaria : (Budapest), 2002, 31 (3) 297-305
ISSN: 0139-3006 CODEN: ACALDI Availability: INIST-16289;
354000104055470090

No. of Refs.: 1 p.1/4
Document Type: P (Serial) ; A (Analytic)
Country of Publication: Hungary
Language: English

Infant formulas are designed to **simulate** not only the content but also the performance of **human milk** as much as possible in order to be an adequate replacement of **human milk**. The most common sources of protein in infant's **formula** are either cow's milk or soy protein (isolate). From this point of view the aim of this study was to determine the nutritive value of these proteins sources in **powdered** infant formulas present in the Croatian market. Protein quality has been evaluated in vivo - feeding young growing rats, and in vitro by multienzyme systems. The results showed that protein digestibility (D) of both formulas are high and not significantly different according to methodology (in vivo and in vitro). Biological value (BV) and net protein utilisation (NPU) of milk protein based **formula** are lower than that found in the literature. The same bioassays for soy protein isolates based **formula** are extremely low, while PER and NPR values are higher than that of proteins in milk based **formula**. The data indicate that protein qualities of both **powdered** infant formulas evaluated in vivo are not satisfying and can not provide nutritional support to healthy infants. At this point further investigations should be done in order to identify the factors affecting protein quality.

English Descriptors: Infant formula; Milk protein; Soy protein; In vivo;
Rat; Protein values; Nutrition

Broad Descriptors: Rodentia; Mammalia; Vertebrata; Infant food; Protein;
Feeding; Rodentia; Mammalia; Vertebrata; Aliment pour nourrisson;
Proteine; Alimentation; Rodentia; Mammalia; Vertebrata; Alimento para
lactante; Proteina; Alimentacion

French Descriptors: Lait infantile; Proteine lait; Proteine soja; In vivo;
Rat; Valeur proteique; Nutrition

Classification Codes: 002A35B16

Copyright (c) 2003 INIST-CNRS. All rights reserved.

17/9/214 (Item 11 from file: 98)
DIALOG(R)File 98:General Sci Abs/Full-Text
(c) 2003 The HW Wilson Co. All rts. reserv.

03006669 H.W. WILSON RECORD NUMBER: BGS195006669
Non-humanised.
Crawford, Michael
New Scientist (New Sci) v. 145 (Jan. 14 '95) p. 47
DOCUMENT TYPE: Feature Article
ISSN: 0262-4079
LANGUAGE: English
COUNTRY OF PUBLICATION: United Kingdom
RECORD TYPE: Abstract RECORD STATUS: New record

ABSTRACT: The neurological differences between children previously fed on **breast milk** and those fed on **formula** has long been the subject of debate. **Formula** milk has less arachidonic and docosahexanoic acids than **breast milk**; these acids have been shown to be important for brain development. A directive issued in 1977 by the International Expert Committee, which was set up by the Food and Agricultural Organisation and by WHO, called for **milk** manufacturers to **imitate** the composition of **breast milk**. Industry did not respond. However, the writer and a colleague, in collaboration with Reckitt and Coleman and Huntingdon Research, succeeded in producing a milk containing the necessary acids in 1974.

DESCRIPTORS:

Infants' food; Infants--Nutrition

8/9/48 (Item 7 from file: 10)
DIALOG(R)File 10:AGRICOLA
(c) format only 2003 The Dialog Corporation. All rts. reserv.

1631777 79455773 Holding Library: FNI
How breastfeeding works
Stanway, Penny
London, , Forbes Publications
Nutrition and food science May/June 1979. (58) , May/June 1979. p.
2-3. ill.
ISSN: 0034-6659
Language: ENGLISH ;
Subfile: FNC (FOOD AND NUTRITION); ;
Document Type: ARTICLE
Abstract: An understanding of the physiology of breast milk production aids mothers who breast feed. **Foremilk**, the milk stored in the ducts under the areolae, is always available, but the bulk of the milk, known as **hindmilk** , is produced only if the let-down reflex operates. This reflex is a delicately balanced mechanism that is triggered normally by stimulation of the skin of the nipple and the tissues under the areola, but can also be conditioned by other stimuli such as the sight of the **baby** . The reflex can be inhibited by strong emotions such as fear. A mother with insufficient milk should allow her **baby** unrestricted access to her breasts day and night, as the increased frequency and length of sucking will cause the milk supply to increase within 2-3 days. Mastitis and breast abscess are invariably caused by allowing the breast to become overfull for long periods.
DESCRIPTORS:; Breast feeding; Human milk; Lactation; Infants (To 2 years);

41/9/34 (Item 4 from file: 50)
DIALOG(R)File 50:CAB Abstracts
(c) 2003 CAB International. All rts. reserv.

02022559 CAB Accession Number: 880429604

Colic, "overfeeding", and symptoms of lactose malabsorption in the breast-fed baby: a possible artifact of feed management?

Woolridge, M. W.; Fisher, C.

Inst. Child Health, Univ. Bristol, Royal Hospital for Sick Children, Bristol BS2 8BJ, UK.

Lancet vol. 2 (8607): p.382-384

Publication Year: 1988 --

Language: English

Document Type: Journal article

Infants fed from both breasts at 1 feed may ingest large volumes of low-fat **milk** compared with those emptying 1 **breast** fully, then moving to the other, since **hind-milk** is richer in fat than fore-milk. This could result in rapid gastric emptying, a large influx of high-lactose feed into the small intestine and overstressing of lactase activity, causing colic, diarrhoea and failure to thrive. Vitamin and triglyceride intake could also be affected. It is suggested that infants come off the 1st breast spontaneously before being offered the 2nd. 22 ref.

DESCRIPTORS: Breast feeding; human milk fat

ORGANISM DESCRIPTORS: Man

BROADER TERMS: Homo; Hominidae; Primates; mammals; vertebrates; Chordata; animals

CABICODES: Milk & Dairy Produce (QQ010); Human Nutrition (General)
(VV100)

41/9/27 (Item 6 from file: 10)
DIALOG(R)File 10:AGRICOLA
(c) format only 2003 The Dialog Corporation. All rts. reserv.

2138194 83001797 Holding Library: AGB

Correlation between changeable human milk constituents and milk intake in breast-fed babies

Dorea, Jose G.; JOPDA Horner, Mary Ruth.; Bezerra, Vera Lucia V.A.
St. Louis, Mo., , C.V. Mosby.

The Journal of pediatrics. v. 101 (1) , July 1982. p. 80-83. charts.
ISSN: 0022-3476

Local Call No: RJ1.A453

Language: English

Includes 16 references.

Intellectual Level: SPECIALIZED (FOR SPECIAL AUDIENCES)

Subfile: FNC (FOOD AND NUTRITION); OTHER US (NOT EXP STN, EXT, USDA;
SINCE 12/76);

Document Type: ARTICLE

Abstract: Biochemical composition (especially fat) differences of fore- and **hind-milk** may be physiologically determined by the **mother** and may serve as signals for the infant's appetite control mechanism. Milk samples from 13 lactating women (ages, 16-37) of 2 socioeconomic levels were analyzed. Samples were taken daily at the beginning and end of each nursing period and analyzed for total solids and fat content. Infants were weighed each time a milk sample was taken. Change in fat content between fore- and hind-milk was measured as a percentage and regressed against change in infant body weight (the proxy for milk intake). No correlations were found between infant milk consumption and milk composition. In view of the variations noted in the absolute and relative concentrations of milk fat produced by individual mothers and the influence of the particular infant on breastfeeding, it appears that, if changes in milk fat and total solids are factors in an infant's appetite mechanism, such changes must be interpreted as a model which gives proper emphasis to the breastfeeding interaction of the mother and her infant. (wz)

DESCRIPTORS: Human milk; Food composition; Frequency of feeding; Breast feeding; Infant feeding; Appetite; Human nutrition research;

Section Headings: Q500 FOOD COMPOSITION; T200 PHYSIOLOGY OF NUTRITION

17/9/169 (Item 45 from file: 50)
DIALOG(R)File 50:CAB Abstracts
(c) 2003 CAB International. All rts. reserv.

00241054 CAB Accession Number: 750418063

Nutritional availability of dried milk formulae of high fat composition in artificially-fed infants. I. Fats and fatty acid balance of low birth weight infants fed on dried milk formulae composed of four different kinds of fat. II. Fat and fatty acid balance of healthy infants fed on dried milk formulae composed of four different kinds of fat.

Tanaka, M.

Dept. of Paediatrics, Okayama Univ., School of Med., Okayama, Japan.

Acta Paediatrica Japonica, Japanese Edition vol. 77 (9): p.608-621, 622-635

Publication Year: 1973 --

Language: Japanese

Document Type: Journal article

Secondary Journal Source: En summ. in Acta Paediatrica Japonica, Overseas Edition (1973), 15, 7-9.

I. 27 low birth wt. infants were fed dried milk formulae containing 3.5% fat composed of (i) 100% butterfat, (ii) 85% butterfat + 15% safflower oil, (iii) 30% butterfat + 70% mixed vegetable oils, or (iv) 100% vegetable oils. Amount and rate of absorption of linoleic and saturated long chain fatty acids were greater, while excretions of neutral fat and free fatty acids were lower, in infants fed (ii) and (iii) than in those fed (i); fat absorption in (i) and (iv) were the same. The pattern of faecal fatty acid excretion did not correspond to that contained in the milk formulae. Fatty acids were excreted in an insoluble saponified form by infants fed (ii) and (iii) but more as neutral and free fatty acids by those fed (iv). II. 14 healthy infants (7 days-4 months old) were fed milk formulae (ii), (iii) or (iv) (see above) or (v) a **milk formula**

simulating human milk and containing 1.5, 0.6 and 3.5% protein, casein and fat respectively. In the 1st month after birth, rates of absorption and faecal excretion of fat in infants fed (iv) were lower than in those fed (ii) and (iii). Infants fed (v) showed similar absorption rates of fat and fatty acids to those fed (ii) and (iii), but faecal excretion in the form of neutral fat and free fatty acids exceeded excretion in the form of insoluble saponified fatty acids. 17 + 28 ref.

DESCRIPTORS: infant feeding; fats; absorption; milk fat; feeds; infants; vegetables; dried milk

IDENTIFIERS: formulae; source; other fats

CABICODES: Milk & Dairy Produce (QQ010); Human Nutrition (General) (VV100)

17/9/168 (Item 44 from file: 50)
DIALOG(R)File 50:CAB Abstracts
(c) 2003 CAB International. All rts. reserv.

00355618 CAB Accession Number: 760424077

Preparation of simulated human milk.

Gruette, F. K.; Schulze, J.; Hampel, H. G.

German Democratic Republic, Akademie der Wissenschaften

United States Patent

(3 896 240):

Publication Year: 1975 --

Language: English

Document Type: Patent

The process involves: (i) treating whey with an anion exchange resin, charged with chloride ions so as to remove substantially all anions of weak acids from the whey; (ii) adding to the treated whey the washed and filtered skim-milk protein obtained following precipitation of skim-milk in HCl solution at pH 4.4-5.1, preferably 4.7; (iii) adding fats, minerals and vitamins to the whey-protein mixture; (iv) homogenizing the resultant mixture; (v) spray-drying it; and (vi) adding commercial lactose powder and starch in such amounts that the reconstituted milk contains 6% (by wt.) of lactose and 2% of wheat starch. The **simulated human milk** composition when reconstituted ready for drinking, has a caloric value of 69 kcal/100 ml, and contains 1.7% protein, 3.5% fats, 8.0% carbohydrates and 0.3% minerals.

DESCRIPTORS: infant feeding; humanized milk; drying

IDENTIFIERS: formulae; spray-

CABICODES: Milk & Dairy Produce (QQ010)

17/9/160 (Item 36 from file: 50)
DIALOG(R)File 50:CAB Abstracts
(c) 2003 CAB International. All rts. reserv.

01191387 CAB Accession Number: 811427434

Effect of a humanized milk, Vitalakt, of varying carbohydrate content, on development of intestinal bifidoflora in infants.

Original Title: Vliyanie razlichnogo po uglevodnomu sostavu gumanizirovannogo moloka "Vitalakt" na razvitie bifidoflory kishhechnika u detei grudnogo vozrasta.

Shvedova, L. V.

Ukrainskii Nauchno-issledovatel'skii Inst. Myasnoi i Molochnoi Promyshlennosti, Kiev, Ukrainian SSR.

Voprosy Pitaniya (No. 3): p:14-17

Publication Year: 1981

ISSN: 0042-8833 --

Language: Russian Summary Language: english

Document Type: Journal article

Infants given Vitalakt, a **formula** which **approximates** closely to **human breast milk**, obtained protein 35 to 4.5 g, fats 6.0 to 7.2 g, carbohydrates 14.0 to 14.8 g and total energy 125 to 136 kcal/kg bodyweight. Vitalakt contained lactose 5.7 to 7.0%, sucrose 0.65 to 2.0%, dextrin-maltose 0.65 to 1.5% and total carbohydrates 8.2 to 10%. In a feeding experiment infants were in 6 groups and given Vitalakt DM (control); Vitalakt I with 1.5% dextrin-maltose; Vitalakt II with 7% lactose; Vitalakt III with added 1.0% lactulose; a **milk** mixture, 'Malysh'; or **breast milk**. Relative counts of bifidoflora in stool diluted to 10⁻⁸ to 10⁻¹⁰ were 36.8, 45.7, 25.0, 78.3, 4.25 and 90.0%. All the infants grew normally. 8 ref.

DESCRIPTORS: microorganisms; intestines; infant foods; milk substitutes

IDENTIFIERS: milk (humanized); breast milk simulant on intestinal

microorganisms of infants

ORGANISM DESCRIPTORS: Man

BROADER TERMS: Homo; Hominidae; Primates; mammals; vertebrates; Chordata; animals

CABICODES: Human Physiology & Biochemistry (VV050); Food Composition & Quality (QQ500); Other Produce (QQ070)

17/9/149 (Item 25 from file: 50)
DIALOG(R)File 50:CAB Abstracts
(c) 2003 CAB International. All rts. reserv.

02489324 CAB Accession Number: 920449845

Infant foods...present and future.

Tsuchiya, F.; Nakai, S.

Chukyo Junior College, 216 Toki-cho, Mizunami-shi, Gifu-ken, Japan.

Conference Title: Proceedings of the XXIII International Dairy
Congress, Montreal, October 8-12, 1990, Vol. 3.

p.2033-2043

Publication Year: 1991

Publisher: International Dairy Federation -- Brussels, Belgium

ISBN: 0-9694713-0-0

Language: English

Document Type: Conference paper

As **human milk** is considered to be the basis of improvement of infant formulas, a great deal of effort has been made to make infant **formula** similar to **human milk**. For **simulating human milk** proteins, the curd tension was reduced and whey proteins were fortified after desalting whey by electrodialysis or ultrafiltration. Taurine has also been fortified in recent infant formulas. For lipid simulation, omega -3 and omega -6 polyunsaturated fatty acids were fortified at the recommended ratio for these 2 groups of fatty acids. Different oligosaccharides have been claimed to have growth-promoting activities for Bifidobacteria; however, the effects of their use in fortification of infant **formula** are still inconclusive. The recommended dose of vitamin K was established in the Codex Standard. Follow-up formulas should be varied in composition according to the weaning habits in each country. Future research will be directed towards the introduction of protective factors found in **human milk** into infant formulas. 13 ref.

DESCRIPTORS: Cows; Infant formulae; fortification; human milk; simulated foods; comparisons

IDENTIFIERS: International Dairy Congress

GEOGRAPHIC NAMES: Canada

BROADER TERMS: female animals; animals; North America; America

CABICODES: Milk & Dairy Produce (QQ010); Human Nutrition (General)

(VV100); Food Composition & Quality (QQ500); Other Produce (QQ070)

35/9/20 (Item 20 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.

06720063 BIOSIS NO.: 000088029489
HUMAN MILK FAT CONTENT WITHIN-FEED VARIATION
AUTHOR: WOODWARD D R; REES B; BOON J A
AUTHOR ADDRESS: BIOCHEM. DEP., UNIV. TASMANIA, G.P.O. BOX 252C, HOBART,
TASMANIA, 7001, AUSTRALIA.
JOURNAL: EARLY HUM DEV 19 (1). 1989. 39-46. 1989
FULL JOURNAL NAME: Early Human Development
CODEN: EHDED
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Changes in milk **fat** content during individual breast-feeds were studied using a modification of the interrupted feed technique (Woolridge et al. (1982): Early Human Dev., 6, 265-272). Each feed was interrupted once, for weighing the **baby** and obtaining a small **milk** sample; weighing and **milk** sampling were also done at the start and end of the feed from that breast. Mathematical analysis of 52 feeds from the **first** breast offered at a feeding episode, and 39 **second**-breast feeds, showed a similar pattern on both types. The **fat** content rose in line with $(V_i/V_e)^{1.35}$ (V being the volume consumed since the feed from that breast began). However, first-breast feeds showed sharp initial and final rises in **fat** content. The authors propose a mechanism to explain the difference in pattern between **first**- and **second**-breast feeds.

DESCRIPTORS: BREAST-MILK COMPOSITION LACTATION
CONCEPT CODES:

10066 Biochemical Studies-Lipids
13006 Metabolism-Lipids
13202 Nutrition-General Studies, Nutritional Status and Methods
13222 Nutrition-Lipids (1972-)
16504 Reproductive System-Physiology and Biochemistry
16501 Reproductive System-General; Methods

BIOSYSTEMATIC CODES:

86215 Hominidae

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):

Animals
Chordates
Vertebrates
Mammals
Primates
Humans

?

Set	Items	Description
S1	59569	(FORMULA OR MILK) (10N) (DRY OR INSTANT OR ARTIFICIAL OR SYN- THETIC OR BABY OR INFANT OR INFANTS OR BABIES OR NEWBORN OR N- EWBORNS OR (NEW(W) (BORN OR BORNS)) OR CHILD OR CHILDS OR CHIL- DREN OR CHILDRENS OR PEDIATRIC?)
S2	99467	(LOW OR LOWER) (6N) FAT OR (HIGH OR HIGHER) (6N) FAT
S3	1705	S1(S) S2
S4	20498	(SEPARATELY OR TWO OR SECOND) (6N) (FEED OR FEEDS OR FEEDING OR FEEDINGS)
S5	13	S3(S) S4
S6	10	RD (unique items)
S7	2748	(TWO OR SECOND OR FIRST) (6N) (BOTTLE OR BOTTLES)
S8	1	S3(S) S7
S9	1	S8 NOT S6
S10	25439	(BREAST OR MOTHER OR MOTHERS) (6N) MILK
S11	59134	(BREAST OR MOTHER OR MOTHERS OR HUMAN) (6N) MILK
S12	2874629	COPY OR COPIES OR COPIED OR COPYING OR SIMULATE OR SIMULAT- ES OR SIMULATING OR SIMULATED OR APPROXIMATING OR APPROXIMATE? OR REPLICAT? OR DUPLICAT? OR REPRODUC? OR IMITAT?
S13	59134	S11(10N) S11
S14	659	S11(10N) S12
S15	882729	FORMULA OR POWDER OR POWDERED OR CONCENTRATE OR CONCENTRAT- ES OR CONCENTRATED
S16	353	S11(S) S12(S) S15
S17	227	RD (unique items)
S18	1015	FOREMILK OR FORE(W) MILK OR HINDEMILK OR HINDMILK OR HIND(W-) MILK OR HINDE(W) MILK
S19	5	S12(6N) S18
S20	5	RD (unique items)
S21	18	S12(10N) S18
S22	8	RD (unique items)
S23	4	S22 NOT S20
S24	189188	(FIRST OR INITIAL) (10N) (SECOND OR LATER)
S25	66	S24(10N) S11
S26	6	S25(S) S12
S27	3	RD (unique items)
S28	4828	(CHANGE OR CHANGING) (6N) FAT
S29	46	S15(10N) S28
S30	30	RD (unique items)
S31	40	SEPARATE(W) BOTTLE?
S32	0	S31(S) S15
S33	426	S24(S) S1
S34	93	S33(S) FAT
S35	70	RD (unique items)
?		

39/9/6 (Item 3 from file: 10)
DIALOG(R)File 10:AGRICOLA
(c) format only 2003 The Dialog Corporation. All rts. reserv.

2653111 87000900 Holding Library: AGB

Choline, phosphatidylcholine and sphingomyelin in human and bovine milk and infant formulas

Zeisel, S.H. Char, D.; Sheard, N.F.

Bethesda, Md. : American Institute of Nutrition.

The Journal of nutrition. Jan 1986. v. 116 (1) p. 50-58. ill., charts.

ISSN: 0022-3166 CODEN: JONUA

DNAL CALL NO: 389.8 J82

Language: English

Includes 39 references.

Intellectual Level: Specialized (For Special Audiences)

Subfile: FNC (FOOD AND NUTRITION); OTHER US (NOT EXP STN, EXT, USDA;
SINCE 12/76);

Document Type: Article

Abstract: The 3 major choline-containing compounds (choline, phosphatidylcholine (PC), and sphingomyelin (SM)) were determined in 292 samples of milk from 15 mothers delivering full-term infants after uncomplicated pregnancies who exclusively breast fed their infants, with comparisons made to similar determinations in several commercial infant formulas. Free choline levels were highest during the first week of lactation, with no difference found among foremilk, middle milk, or hind milk and no observed diurnal pattern of variation. Phosphatidylcholine and SM levels were constant throughout lactation, with **hind milk** containing higher levels than middle or **foremilk**. **Human milk** contained no detectable phospholipase for hydrolyzing PC or SM to choline. The levels of choline, PC and SM in human milk over 15 days postpartum were similar to those in bovine milk and in "humanized" infant formulas made from bovine milk. Soy **protein**-based infant formulas, however, contained more free choline and less SM than mature human milk. (wz)

DESCRIPTORS: human milk; choline; lecithins; sphingolipids; infant formulas; breast feeding; lactating females; food composition;

Section Headings: Q500 FOOD COMPOSITION

?

? ds

Set	Items	Description
S1	59569	(FORMULA OR MILK) (10N) (DRY OR INSTANT OR ARTIFICIAL OR SYN- THETIC OR BABY OR INFANT OR INFANTS OR BABIES OR NEWBORN OR N- EWBORNS OR (NEW(W) (BORN OR BORNS)) OR CHILD OR CHILDS OR CHIL- DREN OR CHILDRENS OR PEDIATRIC?)
S2	99467	(LOW OR LOWER) (6N) FAT OR (HIGH OR HIGHER) (6N) FAT
S3	1705	S1(S)S2
S4	20498	(SEPARATELY OR TWO OR SECOND) (6N) (FEED OR FEEDS OR FEEDING OR FEEDINGS)
S5	13	S3(S)S4
S6	10	RD (unique items)
S7	2748	(TWO OR SECOND OR FIRST) (6N) (BOTTLE OR BOTTLES)
S8	1	S3(S)S7
S9	1	S8 NOT S6
S10	25439	(BREAST OR MOTHER OR MOTHERS) (6N) MILK
S11	59134	(BREAST OR MOTHER OR MOTHERS OR HUMAN) (6N) MILK
S12	2874629	COPY OR COPIES OR COPIED OR COPYING OR SIMULATE OR SIMULAT- ES OR SIMULATING OR SIMULATED OR APPROXIMATING OR APPROXIMATE? OR REPLICAT? OR DUPLICAT? OR REPRODUC? OR IMITAT?
S13	59134	S11(10N)S11
S14	659	S11(10N)S12
S15	882729	FORMULA OR POWDER OR POWDERED OR CONCENTRATE OR CONCENTRAT- ES OR CONCENTRATED
S16	353	S11(S)S12(S)S15
S17	227	RD (unique items)
S18	1015	FOREMILK OR FORE(W)MILK OR HINDEMILK OR HINDMILK OR HIND(W-)MILK OR HINDE(W)MILK
S19	5	S12(6N)S18
S20	5	RD (unique items)
S21	18	S12(10N)S18
S22	8	RD (unique items)
S23	4	S22 NOT S20
S24	189188	(FIRST OR INITIAL) (10N) (SECOND OR LATER)
S25	66	S24(10N)S11
S26	6	S25(S)S12
S27	3	RD (unique items)
S28	4828	(CHANGE OR CHANGING) (6N) FAT
S29	46	S15(10N)S28
S30	30	RD (unique items)
S31	40	SEPARATE(W) BOTTLE?
S32	0	S31(S)S15
S33	426	S24(S)S1
S34	93	S33(S)FAT
S35	70	RD (unique items)
S36	73	S18(10N)S11
S37	3843268	PROTEIN
S38	12	S36(S)S37
S39	6	RD (unique items)
S40	73	S36
S41	49	RD (unique items)
?		

? ds

Set	Items	Description
S1	1014	FORE(W)MILK OR FOREMILK OR HIND? (W)MILK OR HINDEMILK OR HI-NDMILK
S2	1746032	BABY OR BABIES OR CHILD? OR INFANT? OR NEWBORN? OR NEW(W)B-ORN? OR PEDIATRIC?
S3	3153809	FORMULA? OR CONCENTRATE? OR POWDER? OR DEHYDRAT? OR SIMULA-T?
S4	149	S1(S)S2
S5	90	RD (unique items)
S6	16	S5(S)S3
S7	16	RD (unique items)
S8	74	S5 NOT S7
S9	2	S8(S)BOTTL?
S10	2	RD (unique items)
?		

Set	Items	Description
S1	1014	FOREMILK OR FORE(W)MILK OR HIND? (W)MILK OR HINDMILK OR HIN- DEMILK
S2	1714998	INFANT? OR INFANCY OR NEWBORN? OR NEW(W)BORN? OR CHILD? OR BABY OR BABIES OR PEDIATRIC
S3	149	S1(S)S2
S4	3557535	CONCENTRAT? OR POWDER? OR BOTTLE?
S5	75	S3(S)S4
S6	40	RD (unique items)
?		